

REMARKS

This is in response to the Official Action currently outstanding with respect to the above-identified continued prosecution application.

Claims 1-37 were originally presented. Claims 26-37 were elected for further prosecution and Claims 1-27 were cancelled previously, without prejudice. Claims 38-55 were subsequently added by Amendment. Thereafter, Claims 30 and 40 were canceled, without prejudice, and Claims 28, 31, 32, 35, 36, 37, 38, 41, 42, 46, 47 and 52 were amended. By the foregoing Amendment, Applicants respectfully request that Claims 28 and 38 be amended. Applicants do not presently request the cancellation, withdrawal or addition of any claims. Accordingly, upon the entry of the foregoing Amendment, Claims 28-29, 31-39 and 41-55 as hereinabove presented will constitute the claims under active prosecution in the above-identified application. Applicants respectfully submit that (i) no new matter is introduced into the claims of this application by the foregoing Amendment, and (ii) entry of the foregoing Amendment will place this application in condition for allowance.

The claims of this application as they will stand upon the entry of the foregoing Amendment are set forth in full hereinabove as required by the Rules.

More particularly, in the currently outstanding Official Action, the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC 119(a)-(d) or (f), and also confirmed the receipt of the required certified copy of the priority documentation by the United States Patent and Trademark Office.

2. Indicated that the drawings originally filed with this application on 14 September 2000 have been accepted;
3. Acknowledged Applicants' equest for Continued Examination as being appropriately filed;
4. Rejected Claim 38 under 35 USC 112, second paragraph, on the grounds that it is indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention because the phrase "or the like" utilized therein is deemed by the Examiner to be indefinite – **By the foregoing Amendment the phrase "or the like" appearing in Claim 38 has been deleted thereby overcoming this rejection;**
5. Rejected Claims 28, 31, 33-36, 38-39, 41 and 43-46 under 35 USC 102(b) as being anticipated by the Portable Document Format Reference Manual, Version 1.2 that is attributed to Bienz;
6. Rejected Claims 29, 37 and 47-55 under 35 USC 103(a) as being unpatentable over the Portable Document Format Reference Manual and also over the Warlock et al reference (US Patent No. 5,634,064);
7. Rejected Claims 32 and 42 under 35 USC 103(a) as being unpatentable over the Portable Document Reference Manual, Version 1.2 and also over the Ota reference (Japanese Patent No. 5-323941); and

8. Indicated at page 3 that:

“In response, the Examiner agrees with the Applicant that a PDF “page object” cannot be considered a “pre-specified unit” or a distinct file like claimed. However, the Examiner respectfully notes that the claimed invention does not explicitly recite or suggest storing a document in the form of a *plurality* of pre-specified units or distinct files, and also notes that the claimed invention does not explicitly recite or suggest that the pre-specified units are each use to generate only a single page of the document. The Applicants suggest that the claimed invention is directed towards storing an entire document in the form of pre-specified units. No claim, however, explicitly indicates such a feature. For example, Claim 28 makes no mention of a document, reciting only a data storage medium, having at least one pre-specified data unit recorded thereon. Claim 29, dependent from Claim 28, associates a pre-specified unit with a page of a document, but recites only that “each pre-specified unit **includes** the display elements associated with a document page”. Therefore, the claims of the present application do not limit a pre-specified unit or distinct file to representing only a *portion* of a document.”

No further specific comment regarding items 1–4 above is deemed to be required in these Remarks.

Applicants respectfully acknowledge the Examiner’s withdrawal his rejection of Claim 33 under 35 USC 112, second paragraph, and his rejection of Claims 28-29, 31-35, 38-39, 41-45 and 48-55 under 35 USC 101 in response to the last filed Amendment in the above-identified application.

In view of the Examiner’s comments quoted in item 8 above, Applicants have amended independent claims 28 and 38 (the only pending independent claims) so as to recite:

“...said data storage medium having ~~at least one~~ a plurality of pre-specified data ~~unit~~ units that together define a document recorded thereon...”

and

“...said data storage medium having display data associated with an entire document ~~or the like~~ recorded thereon, said display data including a plurality of image data objects for display on a display screen of said display device and all management information associated with each of said image data objects required by said display device for the display, including the scroll display, thereof, comprising:

a computer readable medium on which said display data is recorded in the form of distinct files, each said distinct file containing a pre-selected portion of said display data including at least one of said plurality of image data objects along with all of the respective associated management information required by said display device for the display...”

respectively.

Applicants also have amended claims 28 and 38 so as to clarify the fact that the intervals forming a scroll path are specified by line segments respectively defined by coordinate values of a starting point and an end point according to coordinate values assigned to the display elements in the pre-specified unit. Applicants respectfully submit that this alteration of the phraseology of Claims 28 and 38 simply clarifies the fact that while each of the intervals forming the scroll path has a direction associated with it, it is within the scope of this invention as currently claimed that some or all of the directions associated with the respective intervals may be in line with one another. Hence, Applicants respectfully submit that the scope of the currently pending claims is not altered and no new matter is added to this application by these clarifying amendments.

Applicants respectfully submit that as so amended independent claims 28 and 38 as well as the claims directly and/or indirectly dependent thereon now are in condition for allowance.

The remainder of the currently outstanding rejections of this application contained in the currently outstanding Official Action is essentially the same as those heretofore stated by the Examiner in previous Official Actions during this prosecution. For the sake of completeness of the present response, Applicants respectfully repeat their previous response to the points raised by the Examiner below.

With respect to the Portable Document Format reference, Applicants again respectfully submit that it is important to clarify their understanding of the structure and parameters of that reference for the record. The reason for this is that Applicants believe that the basis for the Examiner's continuing rejections of this application arise not from the substantive structures and modes of operation of the present invention *vis a vis* the Portable Document Format reference, but rather arise from a semantic argument based upon the unfortunately imprecise phraseology chosen for use in the reference.

This problem is believed to arise from the fact that the reference was written for programmers with the goal of explaining the various facets of the Portable Document Format and the interrelationships of those facets with one another rather than as a strictly accurate description of the contemplated groupings of data and managerial functions within the overall PDF document structure. More specifically, it is Applicants' position that the Portable Document Format is based upon documents taken as a whole, and that each page of a Portable Document Format document is stored in the form of "page objects" *without formatting or display information per se*. In other words, the formatting and display information associated with the various data objects is stored separately from the page objects that describe the content and functionality of each single document page that is accessed via the so-called "page tree". Further, an article bead is one of the managerial elements of the PDF document file structure that functions with the format information such that "page documents" such as that disclosed by Mastie can be utilized (i.e., read) as "articles" made up of sequential selections located at various positions on one or more "pages".

Applicants, therefore, respectfully again submit that the PDF reference, like the Warnok, et al reference, is directed to storing **entire documents or the like** (on a page-by page basis) in a computer memory as a so-called "PDF (Portable Document Format) documents". The difference between the Warnock reference and the PDF Manual reference relied upon in support of the present rejections is as follows.

In the Warnock reference, the components of an article contained within a document and the so-called "thread" connecting (associating) those components with one another is added (accomplished) **after** the document is stored. On the other hand, in the PDF reference presently relied upon, the definition and association of article components are accomplished **concurrently with** the storage of the document. Applicants respectfully submit that this distinction is insufficient to justify the Examiner's rejections (i.e., to render the currently pending claims unpatentable).

More particularly, despite the Examiner's detailed analysis of the Portable Document Format Reference Manual, the fact remains that present invention stores the display data associated with an entire data grouping together, rather than in a form dependent upon selections from the catalog of display and formatting functions stored for the entire document. This display data includes image object data, management information associated with each stored image object data and scroll information associated with each image object data, **in distinct, separately controllable pre-specified units (i.e., distinct files) containing only a portion of all of the display data associated with a document to be stored on the storage medium and in direct association with the management information specifically associated therewith.** This is different from the so-called dynamic formatting referred to by the Warlock, et al. reference as being unsatisfactory as well as being different from the disclosures of the Portable Document Format Reference Manual in both of which it is necessary to store the **entire document or the like** in a computer memory as a so-called "PDF (Portable Document Format) document" before any portion ("pre-specified data unit") can be accessed or displayed.

The manner in which the Portable Document Format Reference Manual describes the individual elements of that format relative to the way in which it actually works is unfortunate because the foregoing distinctions are not clear. As alluded to above, it is Applicants' belief that this is the result of the fact that the PDF Reference Manual attempts to describe the Portable Document Format from the perspective of each of its different levels of complexity separately as a means of aiding program developers and others in the use of its various features.

Applicants again respectfully submit and emphasize, however, that a close reading of the PDF Manual clearly suggests that while the Examiner's factual analysis concerning the "bead" concept of identification of article segments and the page co-ordinate definition of each article segment may seem to be supported by the PDF Manual, the Examiner has forgotten (or not noticed) that ***no matter how one approaches the PDF format, it is necessary in the use of each page, or article portion thereof to refer back to information stored as part of the whole PDF file outside of the so-called "page objects" (Note: the PDF Reference Manual discusses PDF files as representative of entire documents including a header, a body, a cross-reference table and a trailer (see chapter 5) wherein the body is made up of various indirect objects such as fonts, pages and sampled images, see page 62).***

Thus, despite other similarities to the present invention, in the article and/or page context, the PDF Reference Manual makes it clear that each selected portion of a so-called "page" that is defined by the so-called "beads" must refer back to the so-called "Contents" parameter of the "page" of which it forms a part. Hence, each article portion must refer back at least to the page information from which it is extracted in order to be appropriately utilized in a scrolling display of an entire article (particularly an entire article having different portions on different pages).

In fact, while it is possible to create PDF units containing one or more separate document pages, there is no provision in the PDF format for saving the data and management information representing defined article segments as separate pre-specified units (Claim 28) or distinct files (claim 38).

Further, while the PDF Manual at certain points seems to broadly suggests that each so-called "page" may be basically separate unto itself as an abstract concept, **the true, real world fact is that at least part of the display information and associated scroll information for each such page depends upon information created and saved in the body portion of the PDF file separately from the page objects (data) in question during the course of the creation and saving of an entire PDF format type document.**

In other words, the pre-specified units of the present invention to the extent that they individually represent pages or article portions contain within themselves all of their own display information, including scroll display control information. The PDF Document Format, on the other hand, does not contemplate that each so-called "page" is to be a pre-specified unit in the sense of the present invention. This is because the display control including scroll display information (for example, the required drivers) are embedded in the PDF file and associated with the data to be displayed by higher level operators associated with the data via catalogs that assemble the various objects making up the body of the PDF file to achieve the desired complete document display. Thus, while the PDF Reference Manual at first reading appears to be discussing the manipulation of documents, pages of documents and article threads running through the documents, a more detailed reading of that manual indicates that the foregoing is but the highest level of explanation of the actual PDF concept. ***This is readily apparent to anyone who has used a PDF document obtained from an outside source from the fact that the entire document has to be downloaded and processed by the computer involved before any part of the PDF document can be accessed for use.***

When reduced to its basics, therefore, Applicants respectfully submit that the PDF concept stores “documents” in the form of “pages” (i.e., groups of page objects) separately from at least some of the data contemplated as being necessary for display of the individual image data (page objects), and separately from all of the other information necessary for the association of that image data (“page objects) in the form of appropriate control sequences including the parameters required to achieve the association and control of the display of various combinations of the image data (“page objects”) as desired.

Accordingly, Applicants respectfully submit that the PDF Manual clearly indicates that the PDF concept might be characterized as including a PDF file containing all of the information making up the document in a database sort of collection (the so-called “body”) including various levels of association of that data that can be accessed and displayed or otherwise used. Hence, it is clear that the so-called “threads” connecting the various portions of an article in the PDF Reference Manual are not the same as (or even akin to) the vectors within the article components of the present invention.

In support of the latter interpretation, Applicants respectfully call attention to the fact that at page 27 of the PDF Manual it is indicated that a PDF file contains a PDF document ***and other supporting data***. Further, the PDF Manual states that ***in addition to a document a PDF file contains the version of the PDF specification and information about the location of important structures within the file***. Further, at page 28 the PDF Manual indicates that the required printer driver consists of a stream of commands ***that are converted into PDF operators which are embedded in the PDF file***. Also, at page 62 the PDF Manual indicates that the body of a PDF file consists of a sequence of indirect objects representing a document, and that ***those objects represent components of the document such as fonts, pages and sampled images***.

Therefore, Applicants respectfully submit that it is not surprising that in the discussion of optimized PDF files the PDF Manual notes that it is contemplated that ***the various “pages” of a PDF document will share objects and resources.*** It also is not surprising that the various pages are contemplated to have ***common attributes and that those common attributes may and will be “inherited” from the preceding page unless otherwise specified. See, pp 77-78; Section 7.4 and pp. 254, 270 and 274.***

Consequently, as emphasized above and now specifically claimed in each of the independent claims of this application, the PDF Manual does not disclose that the management information including scroll display information associated with each image data object is maintained in association with that image data object in a pre-specified unit (distinct file) within which it is stored, nor does the PDF Manual disclose that a complete formatted document, document portion or the like may be separately reproduced by an associated display device using only the management information including scroll display information contained in each of various pre-specified units (i.e., distinct files) in linked association with one another. The PDF document is stored and utilized as a complete whole even in those cases wherein only a specific article or the like is actually displayed and read by the user.

Also, as discussed briefly above, Applicants respectfully submit that the Examiner has misunderstood the Applicants' use of the word “intervals” in the claims of this application as applying to parameters akin to the “R” parameter of the PDF Reference Manual that identifies the position of an article bead. In fact, the claimed “intervals” more closely correspond to the “V” and “N” parameters of the PDF reference Manual. Thus, in the present specification the Partial Blocks are identified in Fig. 37 as the “intervals”, whereas, the Examiner appears to have thought that the “beads” (article sections) in the PDF Reference Manual correspond to the “intervals” of the present application.

To clarify the latter point, the claims of this application were previously amended so as to clarify the fact that the “intervals” are meant to refer to portions of the scroll path itself in the present invention contrary to the meaning imposed upon that wording by the Examiner. As noted above, each interval has a direction associated with it, and some or all of those directions may be the same or different depending upon the particular scroll path.

Applicants respectfully submit that this restatement of their previous arguments in the context of the foregoing clarifying amendments to the claims of the above-identified application in response to the Examiner’s suggestion that the scope of the previously worded claims was too broad to be patentable, presents a complete record upon which the Examiner may reconsider this application and the Applicants’ comments with respect thereto in the context in which they were originally intended (i.e., without the distraction of the Examiner’s justification of his previous position based upon an expansive reading of the terminology of the claims not contemplated by the Applicants previously in this prosecution).

In view of the foregoing Amendment and Remarks, it is respectfully submitted that all of the claims that will be present in this application upon the entry of the foregoing Amendment are in condition for allowance. Accordingly, entry of the foregoing Amendments, reconsideration and allowance of this application in response to this communication are respectfully requested.

Applicants also believe that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

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